



## PATENT ABSTRACTS OF JAPAN

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**HASHIMOTO HIRONOBU**(54) **POLYHYDROXYPIPERIDINES AND PRODUCTION THEREOF**

(57) Abstract:

NEW MATERIAL: Compounds of formula I ( $R_1$  is H or methyl; One of  $R_2$  and  $R_3$  is H and the other is OH).

EXAMPLE:

2-O-Benzyl-3,4,6-tri-O-acetyl-5-O-trimethylsilyl-D-allono nitrile.

USE: A glycosidase inhibitor.

PREPARATION: A ribofuranoside derivative of formula II [One of  $R_4$  and  $R_5$  is H and the other is alkoxy or formula III (X is R,  $\text{CH}_3$ ,  $\text{OCH}_3$  or Cl); One of  $R_6$  and  $R_7$  is H and the other is acyloxy, etc.;  $R_8$  is acyloxy, etc.;  $R_9$  is acyloxy, azide, etc.] and an arabinofuranoside derivative are reacted with cyanotrimethylsilane in the presence of a Lewis acid and the resultant compound is then subjected to ring opening and carbon increase to obtain a compound of formula IV. The trimethylsilyl group of the resultant compound is substituted for a suitable elimination group and the cyano group thereof is subjected to ring closure by reduction to obtain a compound of formula V. Protective groups of the obtained compound of formula V are

removed by a catalytic reduction, thus obtaining the objective compound of formula I.

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